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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VASSILINA NIKOULINA and AGNES SANDOR

Appeal 2016-003107
Application 13/707,745
Technology Center 2600

Before BRUCE R. WINSOR, LINZY T. McCARTNEY, and NATHAN A. ENGELS, *Administrative Patent Judges*.

PER CURIAM.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–12 and 14–21. We have jurisdiction under 35 U.S.C. § 6(b). Claims 13, 22, and 23 are canceled. *See* Response to Non-Final Action 5, 8, 9 (filed Jan. 9, 2015).

We affirm and designate our affirmances as new grounds of rejection within the provisions of 37 C.F.R. § 41.50(b) (2014).

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[1] According to Appellants, the real party in interest is Xerox Corporation. App. Br. 1.

STATEMENT OF THE CASE

The Invention

Appellants' invention "relates to machine translation and finds particular application in connection with a system and method for named entity recognition." Spec. ¶ 1. Claims 1, 12, 14, and 17 are independent, of which claims 1 and 14 are illustrative of the subject matter on appeal:

> 1. A machine translation method comprising:
>
> [a] receiving a source text string in a source language;
>
> [b] identifying named entities in the source text string;
>
> [c] optionally, processing the identified named entities to exclude at least one of common nouns and function words from the named entities;
>
> [d] extracting features from the optionally processed source text string relating to the identified named entities;
>
> [e] with a processor, for at least one of the named entities, based on the extracted features, selecting a protocol for translating the source text string, the protocol being selected from a plurality of translation protocols; and
>
> [f] outputting the target text string produced by the selected protocol,
>
> [g] wherein when a first of the translation protocols is selected, the method includes:
>
> [g1] forming a reduced source string from the source text string in which the named entity is replaced by a placeholder;
>
> [g2] translating the reduced source string with a machine translation system to generate a translated reduced target string,
>
> [g3] processing the named entity separately, and
>
> [g4] incorporating the processed named entity into the translated reduced target string to produce a target text string in the target language; and

> [h] when a second of the translation protocols is selected, the method includes:
>
> > [h1] translating the source text string with a machine translation system, without replacing the named entity with the placeholder, to produce a target text string in the target language.

See App. Br. 15–16 (Claims App'x) (bracketed letters added for ease of reference).

> 14. A machine translation system comprising:
>
> a named entity recognition component for identifying named entities in an input source text string in a source language;
>
> optionally, a rule applying component which applies rules for processing the identified named entities to exclude at least one of common nouns and function words from the named entities;
>
> a feature extraction component for extracting features from the optionally processed source text string relating to the identified named entities;
>
> a prediction component for selecting a translation protocol for translating the source string based on the extracted features, the translation protocol being selected from a set of translation protocols including a first translation protocol in which the named entity is replaced by a placeholder to form a reduced source string, the reduced source string being translated separately from the named entity, and a second translation protocol in which the source text string is translated without replacing the named entity with the placeholder, to produce a target text string in the target language; and
>
> a machine translation component for performing the selected translation protocol; and
>
> a processor for implementing at least one of the components.

See id. at 19–20 (Claims App'x).

The Rejections

Claims 1–12 and 14–21 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. *See* Ans. 2.

The Record

Rather than repeat the arguments here, we refer to the Briefs ("App. Br." filed July 17, 2015; "Reply Br." filed Jan. 22, 2016) and the Specification ("Spec." filed Dec. 7, 2012) for the positions of Appellants and the Final Office Action ("Final Act." mailed Feb. 26, 2015) and Answer ("Ans." mailed Nov. 30, 2015) for the reasoning, findings, and conclusions of the Examiner. Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants did not make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

ISSUE

The issue presented by Appellants' contentions is as follows: Does the Examiner err in concluding claims 1, 12, 14, and 17 are directed to non-statutory subject matter?

ANALYSIS

Claims 1–12

The Examiner concludes that independent claim 1 is directed to nonstatutory subject matter because the claim as a whole does not amount to significantly more than the abstract idea of calculating language translation

parameters. *See* Ans. 2. We agree with the Examiner that claim 1 is directed to an ineligible abstract idea.

To resolve the question of patentability under § 101, we first construe the claim. Here, claim 1 recites a machine translation method, the method including an optional step as well as steps that require performance only when certain conditions precedent are met. *See* App. Br. 15–16. For example, claim 1 recites, in pertinent part:

> [c] *optionally*, processing the identified named entities to exclude at least one of common nouns and function words from the named entities; . . .
>
> [e] . . . selecting a protocol for translating the source text string, the protocol being selected from a plurality of translation protocols; . . .
>
> [g] wherein *when a first of the translation protocols is selected*, the method includes: . . .
>
> [g1] forming . . . ;
>
> [g2] translating . . . ,
>
> [g3] processing . . . , and
>
> [g4] incorporating . . . ; and
>
> [h] *when a second of the translation protocols is selected*, the method includes:
>
> [h1] translating the source text string with a machine translation system, without replacing the named entity with the placeholder, to produce a target text string in the target language.

App. Br. 15–16 (Claims App'x) (emphasis added). First, because in step [c], "processing" is only "optionally" performed, step [c] does not need to be performed to practice the claimed invention. *Cf. In re Johnston*, 435 F.3d 1381, 1384–85 (Fed. Cir. 2006) (affirming the rejection of a dependent claim reciting only an optional element as anticipated because "optional

elements do not narrow the claim because they can always be omitted"). Second, in accordance with the plain language of steps [e], [g], and [h] the claim is met by performing either step [g] or step [h]. In fact, because the recited "plurality of translation protocols" in step [e] is not limited to the first and second protocols, the claim is met by performing an unrecited protocol that performs neither step [g] nor [h]. *See, e.g.,* Spec. ¶ 38 ("while two translation protocols are exemplified, there may be more than two, for example, where there is more than one type of NEP [named entity processing] component").

Regarding the recited protocols, claim 1 provides "when [the] second of the translation protocols is selected," as recited in step [h], the source input string is translated without replacing the named entity with the placeholder (substep [h1]); the forming, translating, processing, and incorporating operations (substeps [g1]–[g4]), which occur only "when a first of the translation protocols is selected" (step [g]), do not need to be performed. *See, e.g.*, Fig. 1, Spec. ¶¶ 36–38. Therefore, in accord with our precedent, a broad but reasonable interpretation of claim 1 encompasses a method in which only steps [a], [b], [d], [e], [f], and [h] are performed. *See Ex Parte Schulhauser et al.*, Appeal 2013-007847, 2016 WL 6277792, at *3–5 (precedential) (PTAB Apr. 28, 2016) (finding that in a method claim, a step reciting a condition precedent does not need to be performed if the condition precedent is not met); *see also Ex Parte Fleming*, Appeal 2014-002849, 2014 WL 7146104 (PTAB Dec. 12, 2014) (expanded panel decision on rehearing); *Ex Parte Urbanet*, Appeal 2011-002606, 2012 WL 4460637 (PTAB Sept. 19, 2012); *Ex Parte Katz*, Appeal 2010-006083, 2011 WL 514314 (BPAI Jan. 27, 2011). For the same reasons discussed above, the

broadest reasonable interpretation of claim 1 also encompasses (i) a method in which only the first protocol is selected and only steps [a], [b], [d], [e], [f], and [g] are performed, and (ii) a method in which neither the first nor second protocol is selected and only steps [a], [b], [d], [e], and [f] are performed.

Having determined the scope of claim 1, we consider the issue of statutory subject matter under 35 U.S.C. § 101. To be statutorily patentable, the subject matter of an invention must be a "new and useful process, machine, manufacture, or composition of matter, or [a] new and useful improvement thereof." 35 U.S.C. § 101. The Supreme Court has held that there are implicit exceptions to the categories of patentable subject matter identified in § 101, including (1) laws of nature, (2) natural phenomena, and (3) abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). Further, the Court has "set forth a framework for distinguishing patents that claim [1] laws of nature, [2] natural phenomena, and [3] abstract ideas from those that claim patent-eligible applications of those concepts." *Id.*, citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012). The evaluation follows the two-part analysis set forth in *Mayo*: 1) determine whether the claim is directed to an abstract idea; and 2) if an abstract idea is present in the claim, determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. *See Alice*, 134 S. Ct. at 2350.

Claim 1 is directed to a process, which is one of the four statutory classes. Following the Court's guidance, we turn to the first step of the *Mayo/Alice* analysis to determine if the claim is directed to one of the judicial exceptions, i.e., an abstract idea.

Appellants' invention involves translating a source text string in a source language into a target test string in a target language. Abstract; Spec. ¶¶ 13, 15. Claim 1 requires, in essence, receiving a source text string in a source language; identifying named entities in the source text string; extracting features from the source text string relating to the identified named entities; based on the extracted features, selecting a protocol for translating the source text string, the protocol being selected from a plurality of translation protocols; and translating the source text string with a machine translation system to produce a target text string in the target language. *See* App. 15–16. Claim 1 is not directed to specific computer or network technology, but rather recites generalized steps relating to a translation process for which a machine, e.g., a computer, is used in its ordinary capacity as a tool. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016) ("[T]he first step in the Alice inquiry . . . asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool.").

Appellants contend claim 1 is not directed to an abstract idea because, *inter alia*, claim 1's recitation of machine translation using different protocols does not neatly fall within one of the categories identified in *Alice* as abstract ideas, such as a mathematical formula, a fundamental economic practice, or an algorithm itself. *See* Reply Br. 8–10; App. Br. 8. We disagree with Appellants' contention. The process required by claim 1 is directed to the computerization of the well-established and fundamental practice of translation. Similarly, in *Novo Transforma Technologies, LLC v. Sprint Spectrum L.P.*, 2015 WL 5156526 (D. Del. 2015), aff'd, ___ Fed.

Appx. ___ (Fed. Cir. 2016), at issue were claims directed to a computer system that received a payload in one media form, translated it into a different media form, and delivered the translated payload. *See id.* at *3. The court in *Novo* held the claims to be directed to an ineligible abstract idea no different from the function of a translator, stating that "[i]ncompatible communication types have existed since before the emergence of computers and the Internet. Translators have been used for centuries to facilitate communication between individuals who speak different languages. The translator receives a message in one language, translates it into another, and delivers the translated message." *Id.*

Here, applying relevant precedent, we conclude that claim 1, similar to the claims at issue in *Novo*, is directed to the abstract idea of translation. *See Enfish*, 822 F.3d at 1334 (in determining whether the claims at issue are directed to an abstract idea, "both this court and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases"); *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015).

Turning to the second step of the *Mayo/Alice* analysis, we analyze the claim as a whole to determine whether any element, or combination of elements, is sufficient to ensure that the claim amounts to significantly more than the exception. Here, Appellants contend "[t]he process of claim 1 does sufficiently more than an abstract idea and thus transforms any abstract idea that there may be into patent eligible subject matter. It specifically implements different translation processes depending on which protocol is selected, which is based on extracted features" (Reply Br. 11). *See id.* at 11–12; App. Br. 9–10. Accordingly, Appellants contend that "conventional

processes for machine translation do not involve [the method of claim 1]." Reply Br. 11.

We disagree with Appellants' contentions. As discussed above, a broad but reasonable interpretation of claim 1 encompasses the selection and implementation of, for example, the second translation protocol *only*. Therefore, contrary to Appellants' contentions, claim 1 can be fully performed by implementing a single conventional translation process in which the source text string is translated into a target text string of the target language without replacing the named entity with the placeholder. *See* App. Br. 15–16. Furthermore, basing the selection of a translation protocol on "extracted features" from the source text string is nothing more than a conventional step familiar to anyone who has manually translated a document from one language to another. For example, a translator would know to account for a named entity in a source document by either leaving it in the source language or translating it to the target language, based on nature of the named entity ("extracted feature"). *See* Spec. ¶¶ 4 (stating that "[t]he correct treatment of named entities is not an easy task for *statistical machine* translation (SMT) systems," suggesting that manual translations can more easily treat named entities) (emphasis added), 78 ("The method can be extended for the case when multiple NE translation systems **34** are available: e.g., do not translate/transliterate (e.g., for person names)").

Appellants further contend that selecting a protocol and translating data from one language to another with a machine translation system "transform[s] the input source language string into a different state or thing[—]a translated target language string." Reply Br. 12. We disagree with Appellants' contention. Although the "target language string" is in a

different language than the "input language string," this does not amount to a transformation into a different state or thing because both the input and target language strings are still data strings. *Contra In re Abele*, 684 F.2d 902, 908–909 (C.C.P.A.1982) (holding that the transformation of raw data into a particular visual depiction of a physical object on a display was sufficient to render the process claim at issue patent-eligible). Moreover, even if we were to consider the translation of data strings to be a transformation, this would be insufficient to render claim 1 patent-eligible because the claim does not require significantly more than the generic computer implementation of a known manual method of manipulating data, i.e., translation. *See DDR Holdings, LLC v. Hotels.com*, L.P., 773 F.3d 1245, 1256 (Fed. Cir. 2014) ("[S]atisfying the machine-or-transformation test, by itself, is not sufficient to render a claim patent-eligible, as not all transformations or machine implementations infuse an otherwise ineligible claim with an inventive concept.") (quotations omitted).

Next, Appellants contend that claim 1 "provide[s] an inventive concept since [it has] been found allowable under sections § 102 and § 103 [sic]" (Reply Br. 13). *See id.* at 13–14; App. Br. 10. We disagree with Appellants' contention because controlling precedent makes clear that § 101 is a threshold inquiry separate from § 102 and § 103. *Bilski v. Kappos*, 561 U.S. 593, 602 (2010); *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1064 (Fed. Cir. 2011) (applying *Bilski*). Indeed, as found by the Supreme Court in *Diamond v. Diehr*, 450 U.S. 175 (1981), "[t]he question therefore of whether a particular invention is novel is 'wholly apart from whether the invention falls into a category of statutory subject matter.'" *Diehr*, 450 U.S. at 190, quoting *In re Bergy*, 596 F.2d 952, 961 (CCPA

1979) (emphasis deleted); *accord Bilsko*, 561 U.S. at 602.

In addition, Appellants contend that claim 1 is patent-eligible because it is confined to a particular useful application and does not unduly preempt every application of machine translation. *See* Reply Br. 14–15; App. Br. 10–11. Appellants assert claim 1 recites specific limitations, "such as selecting a protocol [from a plurality of translation protocols] for translating the source text string based on the extracted features . . . . As a result, the present claims include 'additional features' that ensure the claims are 'more than a drafting effort designed to monopolize the' alleged abstract idea." Reply Br. 14 (quoting *Alice*, 134 S.Ct. at 2357) (emphasis omitted).

We disagree with Appellants' contention. As discussed above, the claim elements Appellants purport to be "additional features" are either conventional or not required by claim 1. Therefore, because claim 1 does not require significantly more than a generic computer implementation of the known manual method of translation, we decline to conclude that claim 1 is patent-eligible lest we "risk disproportionately tying up the use of the underlying [abstract idea], inhibiting [its] use in the making of further discoveries." *Mayo*, 132 S. Ct. at 1294.

Lastly, Appellants' contention that claim 1 "cannot be considered unpatentable because [it is] performed by a computer" is unpersuasive. *See* App. Br. 12; Reply Br. 15–16. As recognized by the Supreme Court, "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention," *Alice*, 134 S. Ct. at 2358; *see also Ultramercial, Inc. v. Hulu*, LLC, 772 F.3d 709, 715–16 (Fed. Cir. 2014) (claims merely reciting abstract idea of using advertising as currency as applied to particular technological environment of the Internet not patent-

eligible); *and Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) ("Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible." (internal citation omitted)).

Accordingly, we conclude the method of claim 1 is directed to a patent-ineligible abstract idea and requires no element or combination of elements that amounts to significantly more than the abstract idea. Moreover, as discussed *infra* regarding claim 14, even if the method of claim 1 were to require performance of conditional step [g] (including substeps [g1]–[g4]), claim 1 still would be directed to a patent-ineligible abstract idea. Therefore, we sustain the rejection of representative claim 1. Regarding dependent claims 2–11 (which stand or fall with claim 1), for the same reasons discussed regarding claim 1, we sustain the rejection. *See* App. Br. 7–12; Reply Br. 7–16. We also sustain the rejection for the computer program product of independent claim 12, whose instructions, when executed, perform a method similar in scope to that of claim 1. *See Ex Parte Kamuf,* Appeal 2015-002645, 2016 WL 4710145, at *3 (PTAB Aug. 31, 2016) (non-precedential).

Because our analysis deviates from the reasoning in the Examiner's Final Rejection and Answer (*see* Final Act. 2; Ans. 2–6), however, we designate our affirmance as a new ground of rejection within 37 C.F.R. § 41.50(b).

Claims 14–16

The Examiner concludes that machine translation system of claim 14

is directed to nonstatutory subject matter because the claim as a whole does not amount to significantly more than the abstract idea of calculating language translation parameters. *See* Ans. 2. Appellants reiterate the contentions advanced for claim 1 and additionally contend claim 14 satisfies the requirements of § 101 because "[t]he process of selecting and implementing a translation protocol recited in claim 14 entails significantly more than simply calculating language translation parameters . . . [by] implementing different translation protocols." Reply Br. 17; App. Br. 12.

Claim 14 recites, *inter alia*,

> [a] machine translation system comprising: . . .
> a prediction component for selecting a translation protocol for translating the source string based on the extracted features, the translation protocol being selected from a set of translation protocols including a first translation protocol in which the named entity is replaced by a placeholder to form a reduced source string, the reduced source string being translated separately from the named entity, and a second translation protocol in which the source text string is translated without replacing the named entity with the placeholder, to produce a target text string in the target language; and
> a machine translation component for performing the selected translation protocol. . . .

App. Br. 19–20. Here, unlike method claim 1, which is written in a manner that does not require all of the steps to be performed should the condition precedent not be met, we interpret the machine translation system of claim 14 as requiring each component to be capable of performing each of its recited functions should the conditions precedent occur. *See Schulhauser*, 2016 WL 6277792, at *7. Therefore, in determining whether claim 14 satisfies the requirements of 35 U.S.C. § 101, we must consider each of the recited components' functions, including the prediction component's

capability to select, from a set of translation protocols: (1) a first translation protocol; *and* (2) a second translation protocol; as well as the machine translation component's capability to perform: (1) the first translation protocol; *and* (2) the second translation protocol. *Accord* Spec. ¶¶ 31 ("In some embodiments, the adapted SMT_{NE} machine translation model may be a hybrid SMT model which is adapted to handle both placeholders and unreplaced named entities."), 38 ("a hybrid translation model SMT_{NE} is applied which is adapted to handling both placeholders and named entities"), 64, 120.

Having established the scope of claim 14, we now turn to the issue of statutory subject matter under 35 U.S.C. § 101. Although claim 14 is directed to a machine, which is one of the four statutory classes, we turn to the first step of the *Mayo/Alice* analysis to determine if the claim is directed to one of the judicial exceptions, i.e., an abstract idea. "We . . . look to whether the claim[] . . . focus[es] on a specific means or method that improves the relevant technology or [is] instead directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery." *McRO, Inc. v. Bandai Namco Games America*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (citing *Enfish*, 822 F.3d at 1336) (additional citation omitted). Here, for reasons similar to those discussed *supra* regarding claim 1, we conclude that claim 14 is directed to the abstract idea of translation. *See* discussion regarding claim 1, *supra*.

Turning to the second step of the Mayo/Alice analysis, we first note that claim 14 recites various elements, including a "rule applying component," "feature extraction component," "prediction component," and "second translation protocol," which do not amount to "significantly more"

than the abstract idea for reasons similar to those discussed *supra* regarding claim 1, steps [c], [d], [e], and [h](including substep [h1]), respectively. *See* discussion regarding claim 1, *supra*. Furthermore, we conclude claim 14's recitation of "a first translation protocol" also does not amount to "significantly more" than the abstract idea of translation. The "first translation protocol['s]" acts of replacing a named entity with a placeholder to form a reduced source string and translating the reduced source string separately from the named entity are nothing more than conventional steps familiar to anyone who has manually translated a document from one language to another. For example, if a translator were to encounter an unknown foreign name in a source document, instead of translating the name, it is commonplace for the translator to merely make a mental note that the name is unknown and continue to translate the remainder of the document. Further evidence that claim 14's "first translation protocol" is not "significantly more" is Appellants' own admission that such a translation protocol was known in the art at the time of invention. *See* Spec. ¶ 6 (disclosing that a "named entity translation . . . can . . . replaced by a fake (non-translatable) value to be re-inserted, which is replaced by the initial named entity once the translation is done, as described in Jon Tinsley, et al., "PLUTO: automated solutions for patent translation," Proc. Workshop on ESIRMT and TyTra, pp. 69–71, April 2012"). Lastly, claim 14's recitation of a "machine translation component" and a "processor" do not amount to "significantly more" as these limitations "merely invoke generic . . . machinery." *McRO*, 837 F.3d at 1314; *Alice*, 134 S. Ct. at 2358; *see also Ultramercial*, 772 F.3d at 715–16; *Dealertrack*, 674 F.3d at 1333–34.

Accordingly, we conclude that the machine translation system

of claim 14 is directed to a patent-ineligible abstract idea and requires no element or combination of elements that amounts to significantly more than the abstract idea. Therefore, we sustain the rejection of claim 14. *See* App. Br. 13; Reply Br. 17. Regarding dependent claims 15 and 16 (which stand or fall with claim 14), for the same reasons discussed regarding claim 14, we sustain the rejection. *See* App. Br. 13; Reply Br. 17. Because our analysis deviates from the reasoning in the Examiner's Final Rejection and Answer (*see* Final Act. 2; Ans. 2–7), however, we designate our affirmance as a new ground of rejection within 37 C.F.R. § 41.50(b).

Claims 17–21

The Examiner concludes that method for forming a machine translation system of claim 17 is directed to nonstatutory subject matter because the claim as a whole does not amount to significantly more than the abstract idea of calculating language translation parameters. *See* Ans. 2. Appellants reiterate the contentions advanced for claim 1 and additionally contend claim 17 satisfies the requirements of § 101 because "[l]earning a prediction model based on the extracted features and translation scores requires significantly more than simply calculating language translation parameters, as the Examiner contends." Reply Br. 17; App. Br. 13.

We find Appellants' contentions unpersuasive. Although claim 17 is directed to a process, which is one of the four statutory classes, we turn to the first step of the *Mayo/Alice* analysis to determine if the claim is directed to one of the judicial exceptions, i.e., an abstract idea. Claim 17 requires, in essence, learning a prediction model for predicting a suitable translation

protocol and applying the prediction model to select one of the translation protocols. *See* App. Br. 20–21. Claim 17 is not directed to specific computer or network technology, but rather recites generalized steps relating to learning and applying a prediction model for which a machine, e.g., a computer, is used in its ordinary capacity as a tool. Accordingly, we conclude claim 17 is directed to an abstract idea of comparing information and using rules to identify the best option. Similarly, in *SmartGene, Inc. v. Advanced Biological Laboratories, SA*, 555 Fed. Appx. 950 (Fed. Cir. 2014), our reviewing court found claims that compared treatment information and rules to identify a ranked listing of therapeutic treatment regimens for a patient to be directed to an ineligible abstract idea, i.e., "comparing new and stored information and using rules to identify medical options." *SmartGene*, 555 Fed. Appx. at 955; *see also* discussion regarding claim 1, *supra*.

Turning to the second step of the *Mayo/Alice* analysis, we analyze claim 17 as a whole to determine whether any element, or combination of elements, is sufficient to ensure that the claim amounts to significantly more than the exception. Here, the claim does not have any such elements that provide "significantly more" than "well-understood, routine, conventional activity." *Mayo*, 132 S.Ct. at 1294, 1298–99. First, the claim recites "optionally, providing rules," which is an optional step that does not need to be performed. *Cf. In re Johnston*, 435 F.3d at 1384–85. Additionally, the claim recites learning a prediction model by extracting features from "optionally processed" source text strings and computing a score for a target text string, which is nothing more than "a routine mental information-comparison and rule-application process," *SmartGene*, 555 Fed. Appx. at

955. For example, in a manual setting, a translator will routinely consider different ways of translating a particular word and select what he or she understands to be the best way to do so. *See id.* at 954–55. Furthermore, claim 17's use of a processor to learn the prediction model is nothing more than a recitation of a generic computer, which cannot transform a patent-ineligible abstract idea into a patent-eligible invention. *See Alice*, 134 S.Ct. at 2358. "Stating an abstract idea while adding the words 'apply it' is not enough for patent eligibility." *Id.*, citing *Mayo*, 132 S.Ct. at 1294 (quotations omitted). In fact, like the processes claimed in *Gottschalk v. Benson*, 409 U.S. 63 (1972), the method of claim 17 "can [] be performed without a computer" or, alternatively, "can be carried out in existing computers long in use, no new machinery being necessary." *Id.* at 67. In view of the foregoing, we understand claim 17 to merely implement an old practice in another known environment. *Cf. FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1094. "In this context, the concern about preempting public use of certain kinds of knowledge, emphasized in *Mayo*, is a grave one." *SmartGene*, 555 Fed. Appx at 955, citing *Mayo*, 132 S.Ct. at 1301–02.

Accordingly, we conclude claim 17 is directed to a patent-ineligible abstract idea and recites no element or combination of elements that amounts to significantly more than the abstract idea. Therefore, we sustain the rejection of claim 17. Regarding dependent claims 18–21 (which stand or fall with claim 17), for the same reasons discussed regarding claim 17, we sustain the rejection. *See* App. Br. 13; Reply Br. 17.

See App. Br. 13; Reply Br. 17. Because our analysis deviates

from the reasoning in the Examiner's Final Rejection and Answer (*see* Final Act. 2; Ans. 2–7), however, we designate our affirmance as a new ground of rejection within 37 C.F.R. § 41.50(b).

DECISION

The decision of the Examiner to reject claims 1–12 and 14–21 under 35 U.S.C. § 101 is affirmed.

Because in some instances the claim interpretation and reasoning we rely on to sustain the rejections of claims 1–12 and 14–21 differs from those of the Examiner, we designate our affirmances of the rejections of these claims as new grounds of rejection so as to provide Appellants with a full and fair opportunity to respond to the thrust of the rejections. This decision should not be construed to imply that, in all instances in which the Board affirms a rejection based on a claim interpretation or reasoning that differs from that of the Examiner, the thrust of the rejection has changed so as to warrant designation of the affirmance as a new ground of rejection. Rather, in this particular case, in light of the scope of the arguments presented by Appellants, the Board deemed it, in the interests of fairness to Appellants, appropriate to designate the affirmance as a new ground of rejection.

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that "[a] new ground of rejection . . . shall not be considered final for judicial review."

Section 41.50(b) also provides that Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner . . . .

(2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. §§ 1.136(a)(1)(iv), 41.50(f), 41.52(b).

AFFIRMED

37 C.F.R. § 41.50(b)